

# Work Order ID 73626

Wednesday, September 07, 2011 2:44:18 PM

Page 1

Item ID: D3443-7

Accept

Revision ID:

Item Name: Tubing

Start Date: 9/14/2011 Start Qty: 10.00

Required Date: 9/21/2011 Req'd Qty: 10.00

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D3443

Rev C

100

0.00



NC BRAKE

Brake NC

Memo

0.00

Brake NC

1- Form as per Dwg D3443 using DT8117 2- Deburr per dwg D3443

SBULL/07

Ac 11.11.02

(X10)

110

0.00



Small Fab

Small Fab

Memo

0.00

Small Fab

GRIND RAD PER DWG

120

0.00



QC5- Inspect part completeness to step on W/O

QC

Memo

0.00

Quality Control

Start

100

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

H:\FORMS\Quality Assurance\approved QAWCRWO RevE

**Work Order ID 73626**

Wednesday, September 07, 2011 2:44:18 PM



Page 2

Item ID: D3443-7

Accept



Setup Start



Revision ID:

Stop



Item Name: Tubing

Start Date: 9/14/2011 Start Qty: 10.00



Cust Item ID:

Required Date: 9/21/2011 Req'd Qty: 10.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130



Mill Conv

CONVENTIONAL MILLING MACHINE

0.00

Memo

0.00

10/12/01

10

Conventional Milling Machine

1- Mill end to length and drill hole as per dwg D3443 12-Deburr as per dwg D3443

Check Length Before machining

140



QC

QC2- Inspect parts off machine FAI/FAIB

0.00

Memo

0.00

10/12/01

10

Quality Control

150



QC

QC8- Inspect parts - second check

0.00

Memo

0.00

SL 11-1001

Quality Control

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

H:\FORMS\Quality Assurance\approved QAWCRWO RevE

# Work Order ID 73626

Wednesday, September 07, 2011 2:44:18 PM



Page 3

Item ID: D3443-7

Accept



Setup Start



Revision ID:

Stop



Item Name: Tubing

Start Date: 9/14/2011 Start Qty: 10.00



Cust Item ID:

Required Date: 9/21/2011 Req'd Qty: 10.00



Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

160

Identify as per dwg & Stock Location: *W/A*

0.00



Packaging

Memo

0.00

Packaging

*QC 11/12-1 (x10)*

170

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

*11/12/11*  
*MF 11-12-01*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

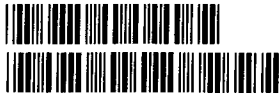
Wednesday, September 07, 2011 2:44:15 PM

Page 1

Work Order ID: 73626

Parent Item: D3443-7

Parent Item Name: Tubing



Start Date: 9/14/2011

Required Date: 9/21/2011

Start Qty: 10.00

Required Qty: 10.00

Comments: At 05.11.14 New issue EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304TR0.750W.120		Purchased	No			100	f	56.0000	0.75	7.894737			
304 ss round tube .750 x .120w													



Ac 11-11-02

## Location

## Loc Qty

## Loc Code

MAT017

11/19/60

56.00000027

114706

0.00000027

118390

56

7.9

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



H:\FORMS\Quality Assurance\approved QA\NCRWO RevE

Work Order: 73626

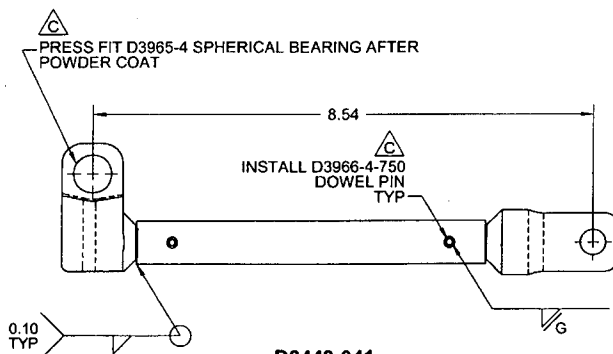
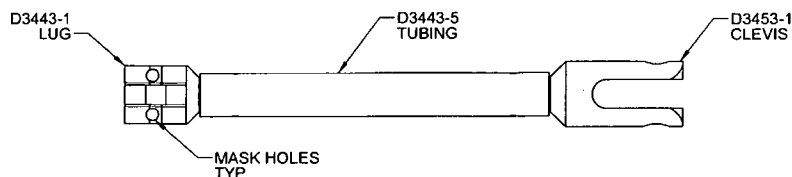
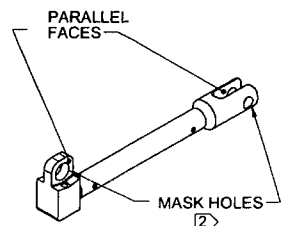
Part Number: D3443-7

Page 1 of 1

X	First Article	X	Prototype
---	---------------	---	-----------

Measured by: 		Audited by: 		Prototype Approval:	
Date: 12/12/01		Date: 11-12-01		Date:	
Rev	Date	Change		Revised by	Approved
A		New Issue		KJ/JLM	

8 7 6 5 4 3 2 1



**D3443-041**

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3  
NO POWDER COAT IN HOLES
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 1.33 lbs
- 8) WELD PER DART QSI 004

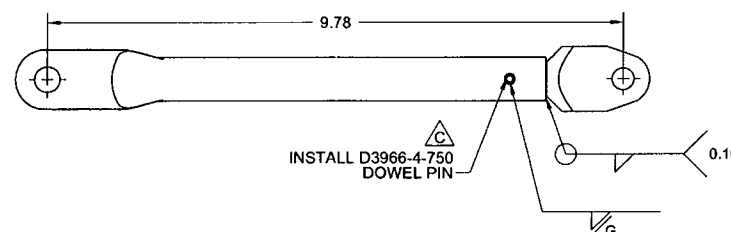
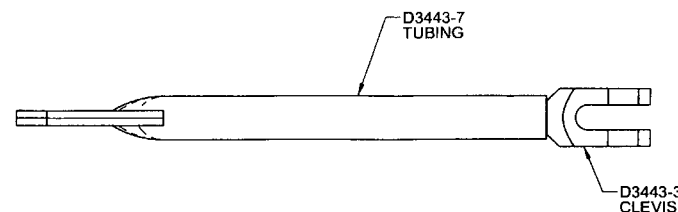
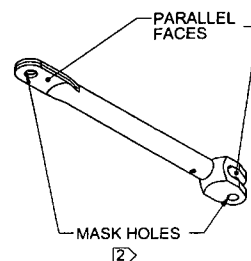
ITEM	QTY	P/N	DESCRIPTION
1	X	D3443-041	STRUT WELDMENT ASSEMBLY
2	1	D3443-1	LUG
3	1	D3443-5	TUBING
4	1	D3453-1	CLEVIS
5	1	D3965-4	BEARING, SPHERICAL
6	2	D3966-4-750	PIN, DOWEL

**RELEASED**  
9/16/15 MSMP

C	DRAWING UPDATED TO CURRENT STANDARDS. REVISED NOTE 12 (ZN A8-1, A8-2); 0.820 WAS 0.720 & 1.43 WAS 1.53 (ZN C2-3); 0.551 WAS 0.451 (ZN C1-3); R0.219 WAS R0.050 (ZN C4-3); D3965-4 WAS SPAENAU P/N (ZN C8-1, B5-2); D3966-4-750 WAS McMASTER-CARR P/N (ZN B5-1); REF PAR 09-018	RF	09.06.25
B	ADDED -9 PIN; REMOVED BALL PLUNGER; REVISE TOLERANCE: & Ø0.125 WAS #30	RF	05.12.05
A	NEW ISSUE	RF	05.09.02
REV	DESCRIPTION	BY	DATE
DESIGN	RF	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	RF	DRAWING NO.	REV. C
MFG. APPR.	RF	D3443	SHEET 1 OF 4
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	STRUT WELDMENT ASSEMBLY	NTS
DATE	09.06.25	COPYRIGHT © 2005 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL. WHO IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

8 7 6 5 4 3 2 1

ITEM	QTY -043	P/N	DESCRIPTION
1	X	D3443-043	STRUT WELDMENT ASSEMBLY
2	1	D3443-3	CLEVIS
3	1	D3443-7	TUBING
4	1	D3966-4-750	PIN



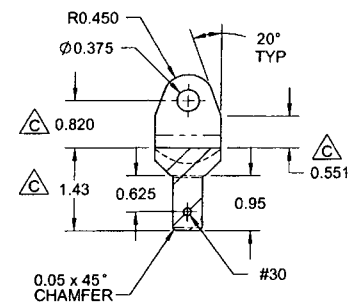
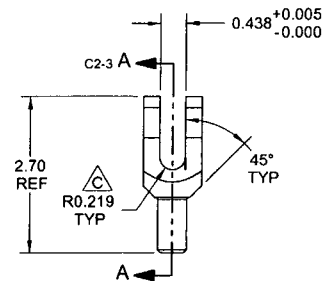
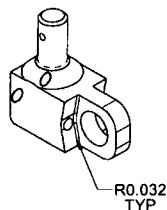
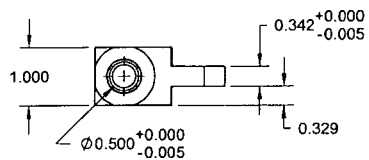
**D3443-043**

**RELEASED**  
09/08/25/14

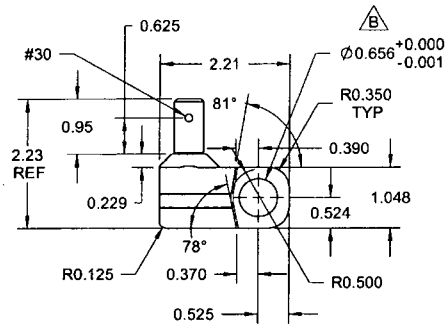
**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3  
NO POWDER COAT IN HOLES
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.97 lbs
- 8) WELD PER DART QSI 004

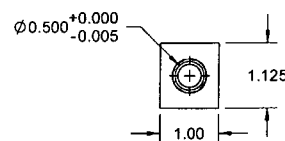
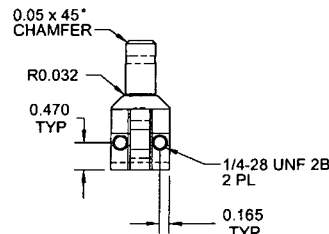
DESIGN	RF	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	RF	DRAWING NO.	REV. C
MFG. APPR.	RF	D3443	SHEET 2 OF 4
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	STRUT WELDMENT ASSEMBLY	NTS
DATE	09.06.25	COPYRIGHT © 2005 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	



# SECTION A-A C4-3



## D3443-1 LUG



## D3443-3 CLEVIS

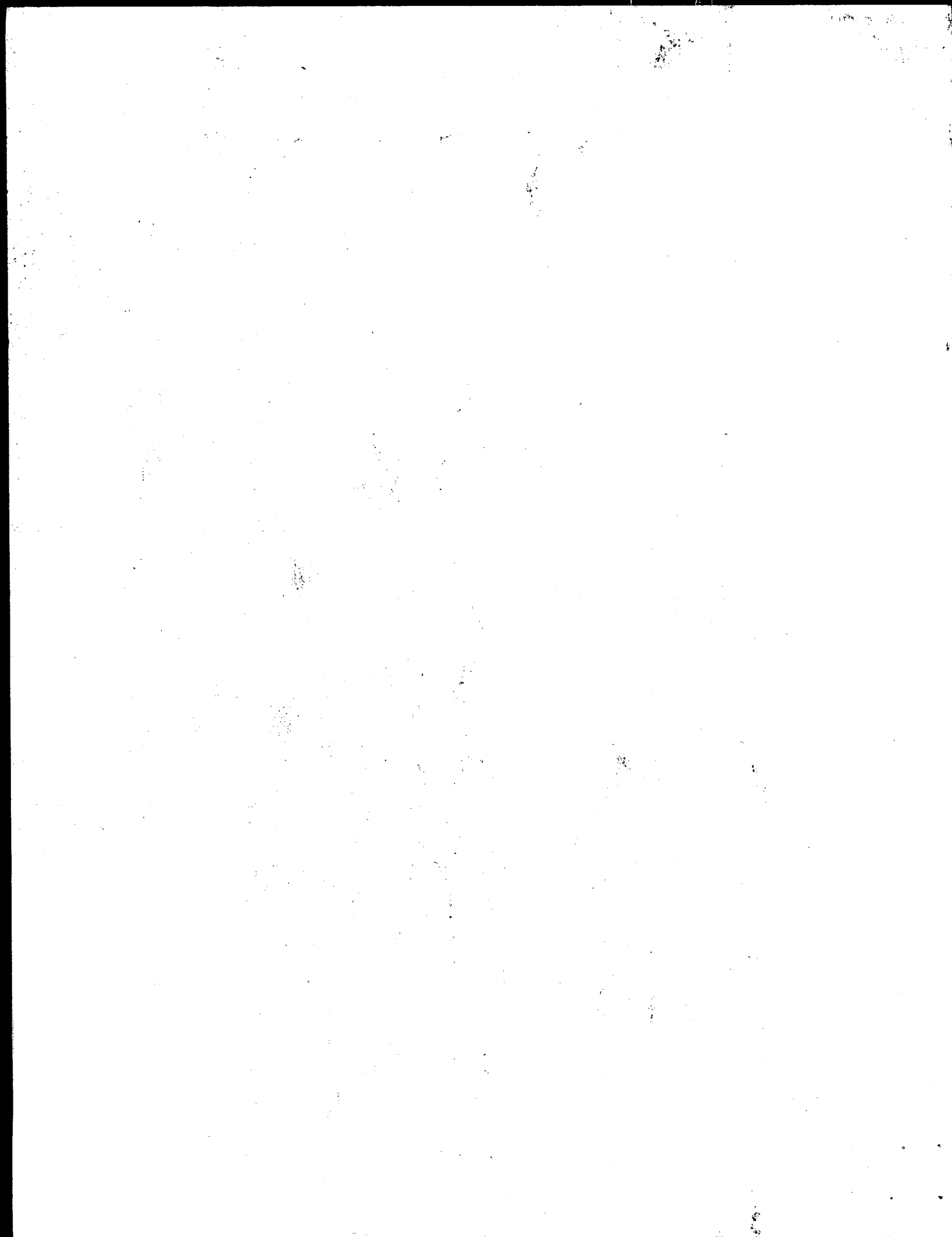
### NOTES:

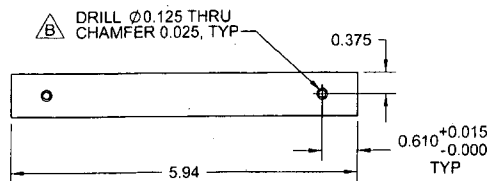
- 1) MATERIAL: D3443-1 = 17-4 SS PER AMS 5604/5643 (REF DART SPEC M17-4B)  
D3443-3 = AISI 304 SS ROUND BAR (REF. DART SPEC M304R)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D3443-1 = 0.50 lbs  
D3443-3 = 0.35 lbs

RELEASED  
07/25/12

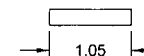
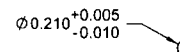
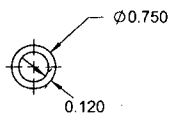
73626

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	UP	DRAWING NO.	REV. C
MFG. APPR.	RF	D3443	SHEET 3 OF 4
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	STRUT WELDMENT ASSEMBLY	NTS
DATE	09.06.25	COPYRIGHT © 2005 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

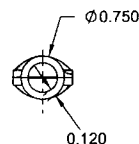
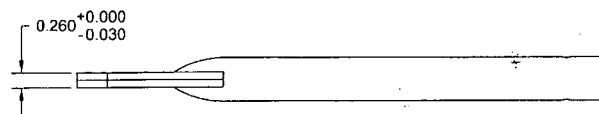




**D3443-5 TUBING**

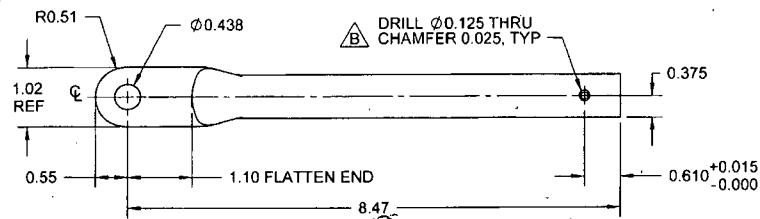


**D3443-9 PIN**



**D3443-9 NOTES:**

- 1) MATERIAL: DELRIN II 150R OR ACETRON GP ACETAL (REF. DART SPEC M-DELRIN-R)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: N/A






**7.02**  
**D3443-7 TUBING**

**D3443-5/-7 NOTES:**

- 1) MATERIAL: AISI 316/304 SS SEAMLESS TUBING (REF. DART SPEC M304TR0.750W.120)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.025 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D3443-5 = 0.41 lbs  
D3443-7 = 0.62 lbs

**RELEASED**  
01/25/25

73626

DESIGN	RF	<b>DART AEROSPACE LTD</b>	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	RF	DRAWING NO.	REV. C
MFG APPR.		D3443	SHEET 4 OF 4
APPROVED		TITLE	SCALE
DE APPR.		<b>STRUT WELDMENT ASSEMBLY</b> NTS	
DATE	09.06.25	COPYRIGHT © 2005 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

